



PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Roy A. Gravel et al.

Art Unit: 1632

Serial No.: 09/487,841

Examiner: Shin-Lin Chen

Filed: January 19, 2000

Customer No.: 21559

Title: (Amended) HUMAN METHIONINE SYNTHASE REDUCTASE:
CLONING, AND METHODS FOR EVALUATING RISK OF,
PREVENTING, OR TREATING NEURAL TUBE DEFECTS,
CARDIOVASCULAR DISEASE, CANCER, AND DOWN'S
SYNDROME

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Claims Pending After Entry of Amendment Pursuant to 37 C.F.R. § 1.121(c)(3)

6. A method for detecting an increased risk of developing a neural tube defect, Down's Syndrome, or cardiovascular disease in a mammalian embryo or fetus, said method comprising detecting the presence of a polymorphic methionine synthase reductase (MTRR) in a test subject, wherein said test subject is a future parent of said embryo or said fetus, and wherein detection of a homozygous MTRR polymorphism in said future parent, said embryo, or said fetus, or detection of either a homozygous or heterozygous MTRR polymorphism in both future parents indicates an increased risk of